

are presently pending. The last amendment merely clarifies the scope of the claim, and is submitted to put it in condition for allowance, or at least in better condition for appeal.

Reconsideration of the rejection of claims 23, 32, 33, 35, 42, 43, 45, 48, 51, 52 and 53 under 35 U.S.C. §112, first paragraph, is respectfully requested.

Applicants respectfully submit that the rejected claims are fully supported by the specification. The specification provides, inter alia, screening methods which would enable a skilled worker, without undue experimentation, to isolate clones containing expression vectors comprising DNA sequences from **any** organism, wherein the clones contain functionally inserted DNA sequences coding for the enzyme 2,4-D monooxygenase, so that the enzyme allows for the growth of the 2,4-D-expressing clones under conditions which preclude the growth of non-expressing clones. See, e.g., page 5, lines 5-17. Thus, the hybridizability of additional sequences with the disclosed sequence is not the only means of selection, and the functional language in the claims is fully supported in the specification.

Furthermore, this screening technique, or a variation modifiable by the skilled worker, could be used to isolate DNA sequences encoding **any** 2,4-D monooxygenase gene which is sufficiently expressible to permit growth of expressing clones under conditions where 2,4-D is the only carbon source, not only those from organisms able to use 2,4-D as an ancillary carbon source, since the cloning technique provides vectors free of their usual controls. Thus, even if a particular species containing a 2,4-D monooxygenase gene which could only use 2,4-D as an ancillary carbon source could not support growth using 2,4-D as a sole carbon source, a screening technique according to the present invention which would enable constitutive production of 2,4-D monooxygenase in the cloned cell could still identify the gene.

However, and in any case, according to In re Marzocchi, 169 U.S.P.Q. 367 (C.C.P.A. 1971):

The first paragraph of §112 requires nothing more than objective enablement. How such a teaching is set forth, either by

the use of illustrative examples or by broad terminology, is of no importance.

and

[T]he claims are to be read in light of the specification, and a specification disclosure which contains a teaching of the manner of using the invention in terms corresponding in scope to those used in describing and defining the subject matter sought to be patented *must* be taken as in compliance with the enabling requirement of the first paragraph of §112, *unless* there is reason to doubt the objective truth of statements therein.

The Examiner has merely suggested, without providing anything other than his speculation as basis for the allegation, i.e., without any evidence or sound scientific reasoning, that other sequences falling within the claimed genus might exist which would not be enabled by the specification. In addition to the fact that this allegation has been adequately rebutted above, this is not a proper basis for a rejection under §112, first paragraph, and withdrawal of the rejection is respectfully requested.

Reconsideration of the rejection of claims 18, 35 and 46 under 35 U.S.C. §112, second paragraph, is respectfully requested.

With respect to the rejection based upon improper dependency of claims 18 and 35, Applicants have amended the dependency, and thank the Examiner for his careful review of the claims.

Claim 46 has been amended to include functional language more clearly specifying that sequences hybridizable with the specified sequences code for polypeptides having the biological activity of 2,4-D monooxygenase. The claim also specifically includes the complement of said sequences in order to make the hybridizability recitation clearer; however, is it submitted that the generic claims implicitly included the corresponding complementary DNA sequences.

Withdrawal of the rejection is therefore respectfully requested.

Reconsideration of the various rejections of the claims under 35 U.S.C. §103 as being unpatentable over Amy et al. in view of Beguin et al., and further in view of Carey et al., and further in view of Comai et al., is respectfully requested.

First of all, it is respectfully submitted that no acquiescence with any of the previous rejections was intended. Even if Applicants unintentionally overlooked a particular one of the previous complex rejections, which is not acknowledged, they hereby expressly traverse all pending rejections.

It is believed the pending rejection of claims 18 and 35 on page 4, lines 14-21 of the Office Action is based upon the incorrect dependency of these claims, which is corrected above. Therefore, it is believed that all pending rejections are based upon the combination of references including Comai et al., and thus the rejection over the Amy, Beguin and Carey references is not separately argued.

Attached herewith is a duly executed Declaration under 37 C.F.R. §1.132 providing analysis of an expert in the field distinguishing the present invention from the cited references. Reconsideration all prior art rejections in view of this Declaration is respectfully requested. It is submitted that this Declaration is timely presented, and should be considered by the Examiner in his reconsideration of the present rejections, particularly in view of the complexity of the pending rejections and the fact that the previous response is submitted to have rebutted all of the then-pending rejections. Since the Examiner did not find the arguments of counsel in the previous response dispositive, this Declaration is provided to more fully support Applicants' position.

The Declaration clearly explains that one of ordinary skill in the art would not have been motivated to combine the cited references to arrive at the present invention.

The present invention provides vectors for the introduction of a completely exogenous gene into plant cells, which has not previously been accomplished. In particular, the analogy suggested by the Examiner between the Comai reference, which introduced an **additional** copy of a gene whose product is poisoned by a herbicide, does not apply in the present case,

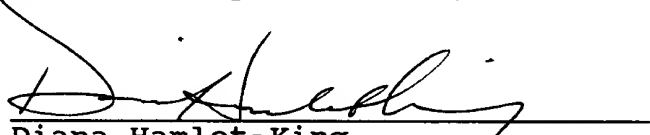
wherein a detoxifying enzyme is introduced into a plant which never had such a gene. Thus, the skilled worker would not have been able to extrapolate the present invention from Comai et al., which was based upon a completely different concept. See the Declaration, page 2, item 1.

Secondly, in contrast with Comai, the present invention would result in the production of products not native to plant cells, and known in fact to be toxic. Therefore, again, a skilled worker would not have been able to predict if 2,4-D monooxygenase could be introduced into plants in order to protect them from the overall toxicity of 2,4-D. See the Declaration, page 3, item 2.

Therefore, the skilled worker would not be motivated to combine the references, and the present invention is not obvious in view of the reference. In re Laskowski, 10 U.S.P.Q.2d 1397 (C.A.F.C. 1989).

In view of the above remarks and amendments, it is respectfully submitted that the application is now in condition for allowance, which action is respectfully requested.

Respectfully submitted,


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